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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,248	11/30/2001	Purushothama Rao	214723	5682

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MORRISON & FOERSTER LLP  
1650 TYSONS BOULEVARD  
SUITE 300  
MCLEAN, VA 22102

EXAMINER

ALEJANDRO, RAYMOND

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/998,248

Applicant(s)

RAO, PURUSHOTHAMA

Examiner

Raymond Alejandro

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 November 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 120. This application is a division of Application No. 09/285624, filed 04/03/1999.

### *Oath/Declaration*

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:  
Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c). (*Applicant's attention is directed to the residence and post office address section*)

### *Drawings*

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "14" has been used to designate both the side terminal posts and the container (*as apparent from Figure 3*). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

4. The abstract of the disclosure is objected to because of the following: it should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the

Art Unit: 1745

full patent text for details e.g. should be brief but technically accurate and descriptive, the patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains or the abstract should include the technical disclosure of the improvement. In this case, the abstract appears to describe a method for making positive grids while the invention per se is directed to a lead-acid battery comprising a positive plate having a grid comprising a particular alloy composition. Correction is required.

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. In this case, the title recites a method for making positive grids while the invention per se is directed to a lead-acid battery comprising a positive plate having a grid comprising a particular alloy composition.

6. The disclosure is objected to because of the following informalities: it is noted that the term "elastic" is strikethrough (i.e. elastie) in the specification (page 12, line 29). Applicant is requested to clarify whether the particular liquid phase is elastic or not. Appropriate correction is required. Additionally, applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1745

9. Claim 2 is indefinite as it depends from claim 9. However, the instant application only contains two claims, for instance, claim 1 and claim 2. For purpose of prosecution, claim 2 has been interpreted as depending from claim 1.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-2 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Rao et al 5691087.

The instant application is directed to a lead acid battery comprising a positive plate having a grid comprising a specific alloy composition. Other limitations include the heat aging process.

With respect to claim 1:

Rao et al'087 disclose a lead acid cell which comprises a battery element comprising a plurality of electrodes, and separators wherein the positive electrode is a positive grid and the

Art Unit: 1745

negative electrode is a negative grid (COL 11, lines 31-46/ABSTRACT). It is also disclosed that the electrode plates 94 and 96 are separated by separators 98 (COL 19, lines 19-21).

Rao et al'087 teach the lead-acid cell including positive plates made from an alloy consisting essentially of lead, from about 0.025 % to about 0.06% calcium, from about 0.3 % to about 0.9 % tin, and from about 0.015 % to about 0.045 % silver (ABSTRACT).

[57]

### ABSTRACT

A sealed lead-acid cell or battery includes positive plates made from an alloy consisting essentially of lead, from about 0.025% to about 0.06% calcium, from about 0.3% to about 0.9% tin, and from about 0.015% to about 0.045% silver.

Example 1 shows positive grids cast from alloys wherein the cast grid has the following compositions (COL 20, lines 40-45 & Col 22, lines 18-21):

- a) Alloy 1: 0.029 % Ca, 0.049 % tin, 0.032 % silver and the remainder lead (Col 20, lines 40-45);
- b) Alloy 2: 0.045 % Ca, 0.048 % tin, 0.031 % silver and the remainder lead (Col 20, lines 40-45);

following compositions: Alloy 1 (0.029% calcium, 0.49% tin, 0.032% silver and the remainder lead), Alloy 2 (0.045% calcium, 0.48% tin, 0.031 silver and the remainder lead), and

- c) Alloy 3: 0.037 % Ca, 0.045 % tin, 0.032 % silver and the remainder lead (Col 22, lines 18-21).

using Alloy 3, an alloy according to the present invention (i.e.—the alloy composition of the cast grid was 0.037% calcium, 0.45% tin, 0.032% silver and the balance lead):

Therefore, a specific example in the prior art which is within the claimed range anticipates the range (See MPEP 2131.03 Anticipation of Ranges).

Rao et al'087 also disclose alloy composition used to make rolled, or wrought strip (COL 13, lines 3-9). Rao et al'087 disclose forming a continuous strip by rolling techniques and then converting such strip into battery grids (COL 13, lines 10-13/COL 13, lines 43-47/ COL 14, lines 31-35/COL 15, lines 55-58). Thus, Rao et al'087 do disclose a rolled alloy strip.

**Examiner's note:** *It is noted that the instant claims (claims 1 and 2) are being construed as product-by-process claims and that the product itself does not depend on the process of making it. Accordingly, in a product-by-process claim, the patentability of a product does not depend on its method of production. In that, it is further noted that the product in the instant claims is the same as or obvious over the product of the prior art. However, the structure implied by the process steps (i.e. the rolled alloy strip per se) is being considered for assessing the patentability of the product-by-process claims. Accordingly, the manufacturing process step (i.e. the rolling technique required to produce the rolled alloy grid) is expected to impart distinctive structural characteristics to the final product (See MPEP 2113 Product-by-Process Claims).*

With respect to claim 2:

Rao et al'087 disclose that cast strips that are rolled by various means to provide a strip of the desired thickness exhibit the similar type of orientation of the grain boundaries as in directly cast strips (COL 13, lines 45-18). That is to say, the cast strip employed to make the positive plates exhibit the expected orientation of the grain boundaries in the alloy which results from the process (COL 13, lines 35-42). Thus, rolled strip exhibits grain boundaries. It is further disclosed that the positive battery grids are characterized by adequate age-hardening responses

Art Unit: 1745

(COL 10, lines 51-55) and heat treating the resulting grids made by expanded grid fabrication techniques (COL 18, lines 12-22).

Therefore, the claims are anticipated by Rao et al'087. However, if the claims are not anticipated the claims are obvious as it has been held similar products claimed in product-by-process limitations are obvious In re Brown 173 USPQ 685 and In re Fessman 180 USPQ 324.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (703) 306-3326. The examiner can normally be reached on Monday-Thursday (8:30 am - 7:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Raymond Alejandro  
Examiner  
Art Unit 1745

A handwritten signature in black ink, appearing to read 'RAM', is written over the printed name of the examiner.